

### **REMARKS**

Claims 1-24 are pending in the application. By this Amendment, Claims 1 and 13 are amended. Favorable reconsideration is respectfully requested in light of the following Remarks.

**1. Miscellaneous.**

In the Interview Summary dated May 14, 2007, the Examiner asserted that the drawings contain multiple uses of reference numeral 110 and may not satisfy 37 CFR §1.84(p)(4). Applicant respectfully disagrees.

As described consistently throughout the specification, reference numeral 110 denotes the machining liquid that circulates through the various fluid lines. As such, the same reference numeral for the machining liquid 110 is consistently used throughout the drawings. The various fluid lines are not denoted with a reference numeral. Thus, Applicant asserts that the drawings satisfy the requirement of 37 CFR §1.84(p)(4). Withdrawal of the objection is respectfully requested.

For the Examiner's convenience, a description of the various reference numerals used in the drawings are given below. It is noted that the high pressure fluid path 130 returns machining fluid 110 to the electrode, while the second fluid return path 136 returns fluid directly to the work tank, as recited in the claimed invention.

<b><u>Element No.</u></b>	<b><u>Description</u></b>
100	flushing and filtering system
102	work tank
104	workpiece
106	electrode
108	guide bush
110	machining liquid
112	inlet
113	outlet/nozzle
114	outlet
116	first (rough) filtering stage
118	first (rough) filtering tank

120	rough filtering device
122	rough filtering pump
124	second (fine) filtering stage
126	second (fine) filtering tank
128	fine filtering device
130	high pressure fluid path
132	high-pressure pump
134	pressure sensor
136	second fluid return path
138	liquid adding pump

**2. Rejection of Claims 1, 3, 5, 7, 8, 10, 13, 15, 19, 20 and 22 under 35 U.S.C. 102(b)**

The Office action rejects Claims 1, 3, 5, 7, 8, 10, 13, 15, 19, 20 and 22 under 35 U.S.C. 102(b) over Suzuki (U.S. Patent No. 5,221,467, hereinafter “Suzuki”). The rejection is respectfully traversed.

By this Amendment, independent Claims 1 and 13 are amended to include the feature of a second return path that introduces finely-filtered machining fluid through a liquid adding inlet directly connected to a work tank. Support for this feature can be found in Paragraph [0012] of the specification and Figures 1 and 2 of the drawings.

By contrast, Suzuki discloses a filtration apparatus in which machining solution from a cleaning vessel 6 is provided to opposing nozzles 11, 12 through a pipe 13, as correctly pointed out in the Office action. *See Fig. 7(a); col. 1, lines 36-40*. However, there is no teaching or suggestion in Suzuki to provide a return path through a liquid adding inlet directly connected to the work tank, as recited in amended Claims 1 and 13. Thus, the Suzuki reference does not anticipate or render obvious the claimed invention, and the rejection is misplaced.

For at least this reason, independent Claims 1 and 13 are allowable over the applied art. Claims 3, 5, 7, 8 and 10, which depend from Claim 1, and Claims 15, 19, 20 and 22, which depend from Claim 13, are likewise allowable over the applied art. Withdrawal of the rejection is respectfully requested.

**3. Rejection of Claims 5, 11, 12, 17, 23 and 24 under 35 U.S.C. 103(a)**

The Office action rejects Claims 5, 11, 12, 17, 23 and 24 under 35 U.S.C. 103(a) over Suzuki in view of Hosaka (U.S. Patent No. 6,533,297, hereinafter “Hosaka”). The rejection is respectfully traversed.

According to MPEP §2143, to establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *In re Linter*, 458 F.2d 1013, 173 USPQ 560, 562 (CCPA 1972). Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Finally, the applied reference must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Claims 5, 11 and 12 depend from Claim 1, and Claims 17, 23 and 24 depend from Claim 13. As mentioned above, there is no teaching or suggestion in Suzuki of at least the feature of a second return path that introduces finely-filtered machining fluid through a liquid adding inlet directly connected to a work tank, as recited in amended Claims 1 and 13. Hosaka adds nothing to overcome this shortcoming in Suzuki. Thus, the combination of Suzuki and Hosaka does not disclose, teach or suggest all the claim limitations as recited in Claims 1 and 13, and therefore the Office action fails to establish a *prima facie* case of obviousness.

For at least this reason, Claims 5, 11, 12, 17, 23 and 24 are allowable over the applied art, taken singly or in combination. Withdrawal of the rejection is respectfully requested.

**4. Rejection of Claims 4, 6, 9, 16, 18 and 21 under 35 U.S.C. 103(a)**

The Office action rejects Claims 4, 6, 9, 16, 18 and 21 under 35 U.S.C. 103(a) over Suzuki. The rejection is respectfully traversed.

As mentioned above, there is no teaching or suggestion in Suzuki of at least the feature of a second return path that introduces finely-filtered machining fluid through a liquid adding inlet directly connected to a work tank, as recited in amended Claims 1 and 13.

Applicant respectfully submits that one skilled in the art would not be motivated to modify Suzuki because the supply of machining fluid to the nozzles 11, 12 is necessary for the Suzuki to be fully operational. *See col. 1, line 67-col. 2, line 9.*

For at least this reason, Claims 4, 6 and 9, which depend from Claim 1, and Claims 16, 18 and 21, which depend from Claim 13, are allowable over the applied art, taken singly or in combination. Withdrawal of the rejection is respectfully requested.

### **Conclusion**

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of the application is earnestly solicited.

Should Examiner Popovics believe anything further would be desirable in order to place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

It is believed that any additional fees due with respect to this paper have already been identified. However, if any additional fees are required in connection with the filing of this paper, permission is given to charge account number 07-0868 in the name of General Electric Company.

14 June 2007

Respectfully submitted,

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